



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/688,657	10/17/2003	Qiang Luo	89038PCW	1222
1333 7590 02/06/2008 EASTMAN KODAK COMPANY PATENT LEGAL STAFF 343 STATE STREET ROCHESTER, NY 14650-2201			EXAMINER HENN, TIMOTHY J	
			ART UNIT 2622	PAPER NUMBER
			MAIL DATE 02/06/2008	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

## Office Action Summary

### Application No.

10/688,657

### Applicant(s)

LUO, QIANG

### Examiner

Timothy J. Henn

### Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 August 2007.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments, see pre-appeal brief request, filed 23 August 2007, with respect to the rejection(s) of the claim(s) under 35 USC §102 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Olding et al. (US 6,970,597).

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-19 are rejected under 35 U.S.C. 102(e) as being anticipated by Olding et al. (US 6,970,597).

#### **[claim 8]**

Regarding claim 8, Olding discloses an apparatus for reducing charge diffusion crosstalk (i.e. electrical crosstalk), comprising: means for inputting crosstalk coefficients for a first pixel of a first color for reducing diffusion crosstalk by electronics migrating to the first pixel from adjacent pixels of colors that are different from the first color (Figure

6, Step 708; c. 13, l. 25 - c. 14, l. 19; note that the kernels are designed to reduce all imaging artifacts, including electrical crosstalk, c. 7, ll. 41-57; c. 25, ll. 51-60); means for sampling the first pixel to produce a first measured pixel value (Figure 6, Item 722; i.e. reading image sensor data; c. 13, ll. 25-41); means for sampling a group of the adjacent pixels to produce adjacent measured pixel values (Figure 6, Item 722; i.e. reading image sensor data; c. 13, ll. 25-41); and means for applying the crosstalk coefficients to the first measured pixel value and the adjacent measured pixel values such that crosstalk effects are reduced in the first measured pixel value (Figure 6; c. 13, l. 25 - c. 14, l. 19).

**[claim 9]**

Regarding claim 9, Olding discloses a group of adjacent pixels which are selected from a group consisting of pixels immediately surrounding the first pixel (c. 13, ll. 49-61; note Olding discloses the use of a  $n \times n$  neighborhood of pixels which contains immediately surrounding pixels, Figure 8 shows an example of the  $n \times n$  neighborhood where  $n=5$ , however it is noted that Olding is not limited to only  $n=5$ ).

**[claim 10]**

Regarding claim 10, Olding discloses a group of adjacent pixels of different colors are of two colors that are different from the first color (e.g. Figure 8, note the presence of B and G pixels in the Red pixel neighborhood).

**[claim 11]**

Regarding claim 11, Olding discloses applying color correction coefficients to the first measured pixel value and the adjacent pixel values such that the first pixel color

filter spectral response is improved in the first measured pixel value (Figure 6, Step 708; c. 13, l. 25 - c. 14, l. 19; note that the kernels are designed to reduce all imaging artifacts, including distortion caused by the color filter pattern, c. 7, ll. 41-57; c. 25, ll. 51-60).

**[claim 12]**

Regarding claim 12, Olding discloses a combining the crosstalk coefficients and color correction coefficients (i.e. the same coefficients are used to accomplish both; Figure 6, convolution kernels).

**[claim 13]**

Regarding claim 13, Olding discloses combining the crosstalk coefficients and color correction coefficients before applying the coefficients to the first measured pixel value (Figure 6; note that the coefficients are determined and stored prior to their application).

**[claim 14]**

Regarding claim 14, note that Olding does not disclose the use of any multiplier means or adder means in use of the coefficients, instead a single processing device is used to multiply and add (c. 13, ll. 26-67).

**[claims 1-7]**

Claims 1-7 are method claims corresponding to apparatus claims 8-14. Therefore, claims 1-7 are analyzed and rejected as previously discussed with respect to claims 8-14.

**[claims 15-19]**

Regarding claims 15-19, see claims 8-11 and 14 respectively.

***Conclusion***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- |     |                |                 |
|-----|----------------|-----------------|
| i.  | Duesman et al. | US 2005/0057655 |
| ii. | Jaspers        | US 2002/0181770 |

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Timothy J. Henn whose telephone number is (571) 272-7310. The examiner can normally be reached on M-F 11-7.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on (571) 272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Application/Control Number:  
10/688,657  
Art Unit: 2622

Page 6

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



TJH  
2/1/2008